

REMARKS

Claims 1-71 are pending in this application. By this Amendment, Applicants amend claims 28, 33 and 52.

Claims 33-71 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over Kawashima (USP 5,168,445) in view of Rembert (USP 5,101,352). Claims 8-32 and 51 were rejected under 35 USC Section 103(a) as being unpatentable over Kawashima et al. and Rembert further in view of Beasley et al. (U.S. Patent No. 4,827,423). Applicants respectfully traverse these rejections.

Regarding the rejection of Claims 33-71, Applicants' Claim 33 recites the following steps in combination:

    "receiving data identifying actual number of units sold of a good by a sample number of retail outlets;  
    estimating a total number of units of said good sold for all retail outlets by scaling-up said received data;  
    predicting future demand for said good based on said estimated total number of units of said good sold;  
    determining a production quantity of said good based on said predicted future demand; and  
    determining required quantities of raw materials required for manufacturing the production quantity of said good."

Applicants' claim 52 recites "An apparatus for controlling production of manufactured goods comprising a processor and a memory containing a stored program, the stored program causing said processor to perform" the combination of steps set forth in Claim 33.

Regarding the rejection of claims 8-32 and 51, Applicants' Claim 8 recites the combination including:

    "a plurality of point of sales terminals each including an electronic interface which obtains sales information concerning sales of a plurality of goods;  
    a main control unit including an input device for receiving the sales information

from the point of sales terminals, a main production controller including a production size determining unit for determining a production quantity to be produced in the future for the plurality of goods based on the sales information received from the plurality of point of sales terminals, and an output device for outputting data indicative of the production quantity determined by the production size determining unit; and

a manufacturing unit for manufacturing the plurality of goods based on the sales information which is collected at the plurality of point of sales terminals and transmitted from the plurality of point of sales terminals to the main production controller, wherein after the production size determining unit determines the production quantity, the main production controller transmits the output data indicative of the production quantity determined by the production size determining unit to the production unit and the production unit manufactures the production quantity of the plurality of goods in response to receiving the output data indicative of the production quantity from the main production controller."

The prior art relied upon by the Examiner fails to teach or suggest the claimed combination set forth in Applicants' claims 8, 33 and 52. At most, the prior art, specifically Kawashima, teaches an automatic ordering system that generates orders based partially on POS data. What is output from Kawashima is a very conventional order slip that is printed on paper as shown in Fig. 12 of Kawashima.

The Examiner alleged that "receiving sales information from the plurality of points of sales terminals would have been obvious to the skilled artisan in order to provide a remotely rapid and safe transmission of data to a remote computer." Prior art rejections must be based on evidence. Although the Examiner admitted that Kawashima and Rembert are deficient in this teaching, and that Beasley teaches a manufacturing system which has nothing to do with POS terminals or data, the Examiner failed to point to a specific prior art reference or teaching that supports the conclusion of obviousness made in this statement. The Examiner is requested to cite a specific prior art reference that teaches this feature and the overall combination of element and functions set forth in Applicants' claims to support this allegation.

Furthermore, the Examiner admitted that neither Kawashima nor Rembert

teaches or suggests a manufacturing unit. However, the Examiner relies upon the teaching of Beasley to allegedly cure the deficiencies of Kawashima and Rembert.

Beasley merely teaches a conventional manufacturing unit located at a manufacturing plant that includes computers for determining a production quantity to be manufactured based on orders received from customers and then manufacturing that determined production quantity. The portion of the patent to Beasley cited by the Examiner merely teaches that a computer is used to store order information that can be updated periodically as new customers' sales information is entered so as to allow the manufacturing production quantity determining system to take into account all sales orders before making a final manufacturing plan.

Thus, the combination of Rembert, Kawashima and Beasley would result in a conventional divided ordering and manufacturing system that are divided into two non-joinable systems: (1) a customer ordering system; and (2) a manufacturing plant control system. In such a divided system, the customer places orders after determining an appropriate order amount (as taught by Kawashima), the orders from the customers are placed with a manufacturing plant like that taught in Beasley, and the sales order data is input by workers at the manufacturing plant into computers at the plant. Based on all the sales orders from various customers and other information, which is periodically updated (e.g. every 15 seconds), the manufacturing plant computers determine an appropriate amount of product to manufacture and then that amount is manufactured at the manufacturing plant.

Even assuming arguendo that the prior art references could be combined as proposed by the Examiner, the combination of Rembert, Kawashima and Beasley falls to teach or suggest an integrated system including a plurality of point of sales terminals, a production quantity determining unit, and a manufacturing unit for manufacturing the plurality of goods based on the sales information which is collected at the plurality of point of sales terminals and transmitted from the plurality of point of sales terminals to the main production controller, wherein after the production size determining unit determines the production quantity, the main production controller transmits the output data indicative of the production quantity determined by the production size determining

unit to the production unit and the production unit manufactures the production quantity of the plurality of goods in response to receiving the output data indicative of the production quantity from the main production controller.

As noted above, there is no teaching or suggestion in the combination proposed by the Examiner of a manufacturing unit that operates such that, after the production size determining unit determines the production quantity, the main production controller transmits the output data indicative of the production quantity determined by the production size determining unit to the production unit and the production unit manufactures the production quantity of the plurality of goods in response to receiving the output data indicative of the production quantity from the main production controller.

Furthermore, there would have been absolutely no motivation to combine the prior art references as proposed by the Examiner. The Examiner alleged that it would have been obvious to "incorporate the teaching of Beasley into the combination of Rembert and Kawashima et al. in order to manufacture a received quantity of products for accurate and timely producing and delivering of products to the plurality of sales terminals." This allegation is directly contrary to the well known and relevant state of the art at the time Applicants' invention was made.

In fact, Kawashima, Rembert and Beasley all teach away from the combination proposed by the Examiner and from Applicants' claimed combination. Kawashima teaches away from such a claimed combination because Kawashima teaches that the conventional two part system that is divided between customers and manufacturers should stay divided. More specifically, Kawashima teaches that an order slip should be produced by the automatic ordering apparatus and such an order slip must then be sent to a manufacturing plant for processing and manufacturing and also must be sent to a raw materials resource system such as that taught by Rembert. Rembert affirms the need for this divided system by clearly providing for a sales order entry module 22 which requires a worker to input sales orders (such as that produced by the system of Kawashima) into a computer so as to have the computer determine how to allocate the raw materials. Further, Beasley also confirms the divided system in that Beasley teaches that all of the sales order information from a plurality of customers should be

used to determine an overall manufacturing production quantity which is stored so that it can be updated and altered until an appropriate manufacturing plan is made.

The reason for this is the underlying reason why the divided two separate systems have existed until Applicants' claimed invention was developed. In the ordering and manufacturing systems that existed prior art Applicants' claimed invention, the manufacturing plant would not and could not allow the customer or purchaser of the manufactured goods to determine what an appropriate quantity is to manufacture since the customers had no experience or knowledge of manufacturing and how to manufacture the goods. Similarly, the customer would not allow the manufacturing plant to have sales information such as POS data since this data needed to be reviewed, corrected and altered before a sales order could be generated and the manufacturing plant had no experience in dealing with such complicated matters.

Simply put, at the time of Applicants' claimed invention was made, there would have been absolutely no motivation for one of ordinary skill in the art to make the combination proposed by the Examiner. In fact, the person of ordinary skill at the time would have readily recognized the various and compelling needs for separate ordering and manufacturing systems, and these well known needs for separate systems would have prevented any one of ordinary skill in the art from combining Rembert, Kawashima and Beasley.

Since each of the prior art references teach away from Applicants' claimed invention, these references cannot support a *prima facie* case of obviousness since it is improper to rely on any reference that diverges or teaches away from the claimed invention.

Thus, Applicants respectfully submit that Claims 8, 33 and 52 are allowable over the prior art relied upon by the Examiner. The claims that are dependent upon claims 8, 33 and 52 are allowable for at least the reasons that claims 8, 33 and 52 are allowable for the reasons described above.

Applicants' claims 22 and 28 are also allowable over the prior art relied upon by the Examiner for the reasons discussed above and also for the reasons discussed in the following paragraphs.

Applicants' Claim 22 recites the combination including:

"a point of sales subsystem including:

a plurality of point of sales terminals each including a central processor and an input device for receiving and storing information concerning sales of a plurality of products; and

a flexible manufacturing subsystem including:

a main controller receiving the information from the point of sales subsystem and determining a production quantity of the products to be produced in the future based on the sales information received from the point of sales subsystem; and

a manufacturing controller receiving the production quantity from the main controller and controlling a plurality of production drive units for controlling manufacture of the production quantity of the plurality of products determined by the main controller."

Rembert, Kawashima and Beasley, applied alone or in combination, fail to teach or suggest the combination of: (1) POS terminals; and (2) a flexible manufacturing subsystem that includes BOTH: (a) a main controller receiving the information from the point of sales subsystem and determining a production quantity of the products to be produced in the future based on the sales information received from the point of sales subsystem; and (b) a manufacturing controller receiving the production quantity from the main controller and controlling a plurality of production drive units for controlling manufacture of the production quantity of the plurality of products determined by the main controller.

Further, Applicants' Claim 28 has been amended to recite a method including the combination of steps:

"collecting sales information about products sold at a plurality of point of sales terminals;

transmitting the sales information to a production size determining unit;

executing a computer program at the production size determining unit to determine a production quantity of the products to be produced in the future based on the sales information collected from the point of sales terminals and to generate output

data indicative of the production quantity determined at the production size determining unit;

transmitting the output data indicative of the production quantity determined at the production size determining unit to a flexible manufacturing controller which is operatively connected to the production size determining unit; and

manufacturing the production quantity of the products based on the sales information data collected at the plurality of point of sales terminals and in accordance with the output data indicative of the production quantity from the production size determining unit and controlling the manufacturing of the production quantity of the products via the flexible manufacturer controller and based on and in response to receiving the transmission of the production quantity determined by the production size determining unit."

As noted above, the teachings of Rembert, Kawashima and Beasley all relate to a separate, divided two part system that includes an independent ordering system and an independent manufacturing system. With two such separate and distinct systems, and because of the above-described reasons for maintain such systems independent of each other, Applicants' claimed steps of transmitting the output data indicative of the production quantity determined at the production size determining unit to a flexible manufacturing controller which is operatively connected to the production size determining unit and manufacturing the production quantity of the products based on the sales information data collected at the plurality of point of sales terminals and in accordance with the output data indicative of the production quantity from the production size determining unit and controlling the manufacturing of the production quantity of the products via the flexible manufacturer controller and based on and in response to receiving the transmission of the production quantity determined by the production size determining unit, would have been absolutely impossible.

Thus, Applicants respectfully submit that claims 22 and 28 are allowable for all of the reasons set forth above. Claims 9-21, 23-27 and 29-32, depend upon claims 8, 22 and 28, respectively, and are therefore allowable for at least the reasons that claims 8, 22 and 28 are allowable.

Serial No. 09/221,656  
Page 11

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1-71 are allowable.

In view of the foregoing Remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

To the extent necessary, Applicants petition the Commissioner for a Three-month extension of time, extending to April 4, 2001, the period for response to the Office Action dated October 4, 2000. A credit card authorization form is enclosed for payment of the fee for the three month extension of time.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

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Respectfully submitted,

  
Attorneys for Applicant

Joseph R. Keating  
Registration No. 37,368

Christopher A. Bennett  
Registration No. 46,710

**KEATING & BENNETT LLP**  
10400 Eaton Place, Suite 312  
Fairfax, VA 22030  
Telephone: (703) 385-5200



**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

29. A method of manufacturing products, the method comprising the steps of:  
collecting sales information about products sold at a plurality of point of sales terminals;

transmitting the sales information to a production size determining unit;  
executing a computer program at the production size determining unit to determine a production quantity of the products to be produced in the future based on the sales information collected from the point of sales terminals and to generate output data indicative of the production quantity determined at the production size determining unit;

transmitting the output data indicative of the production quantity determined at the production size determining unit to a flexible manufacturing controller **which is operatively connected to the production size determining unit**; and

manufacturing the production quantity of the products based on the sales information data collected at the plurality of point of sales terminals and in accordance with the output data indicative of the production quantity from the production size determining unit and controlling the manufacturing of the production quantity of the products via the flexible manufacturer controller and based on **and in response to receiving the transmission of** the production quantity determined by the production size determining unit.

33. A method for supplying manufactured goods, comprising the steps of:  
receiving data identifying actual number of units sold of a good by a sample number of retail outlets;

estimating a total number of units of said good sold for all retail outlets by scaling-up said received data;

predicting future demand for said good based on said estimated total number of units of said good sold;

determining a production quantity of said good based on said predicted

future demand; [and]

determining required quantities of raw materials required for  
manufacturing the production quantity of said good;

transmitting data concerning the required quantities of raw materials  
required for manufacturing the production quantity of said good to a raw  
materials controller and using the raw materials controller to provide the  
raw materials required for manufacturing the production quantity of said  
good to a manufacturing plant; and

transmitting the production quantity of said good to a flexible  
manufacturing controller and using the flexible manufacturing controller to  
control manufacturing of the production quantity of said good at the  
manufacturing plant.

52. An apparatus for controlling production of manufactured goods comprising a  
processor and a memory containing a stored program, the stored program causing said  
processor to perform the steps of:

receiving data identifying actual number of units sold of a good by a  
sample number of retail outlets;

estimating a total number of units of said good sold for all retail outlets by  
scaling-up said received data;

predicting future demand for said good based on said estimated total  
number of units of said good sold;

determining a production quantity of said good based on said predicted  
future demand; [and]

determining required quantities of raw materials required for  
manufacturing the production quantity of said good;

transmitting data concerning the required quantities of raw materials  
required for manufacturing the production quantity of said good to a raw  
materials controller and using the raw materials controller to provide the

Serial No. 09/221,656  
Page 14

raw materials required for manufacturing the production quantity of said  
good to a manufacturing plant; and

transmitting the production quantity of said good to a flexible  
manufacturing controller and using the flexible manufacturing controller to  
control manufacturing of the production quantity of said good at the  
manufacturing plant.